# *M5661User Manual*

## Revision History

| Version | Date |
|---|---|
| 1.0 | Dec.15, 2004 |

This document contains confidential proprietary information that is solely for authorized personnel. It is not to be disclosed to any unauthorized person without prior written consent of ALi Corporation.

ALi Corporation

ALi Corporation makes no representations or warranties with respect to the accuracy or completeness of the contents of this document. No license, whether express, implied, arising by estoppel or otherwise, to any intellectual property right is granted by this document.

ALi Corporation also reserves the right to make changes to these specifications and product description at any time without notice. Contact your local sales office to obtain the latest specifications before placing your order.

Third-party brands and name mentioned in this publication are for identification purpose only and may be the property of their respective owners.

Copyright © ALi Corporation, 2004. All rights reserved

**History**

| Date | Version | Description | Who |
|---|---|---|---|
| 9/15/2004 | 0.9 | First release | David Chiu |
| 12/15 | 1.0 | Update features | David Chiu |
| 10/22/2005 | 1.2 | Update features | Yen lung Chiu |

# Contents


Contents ..... 3
1 Features ..... 4
2 Overview ..... 6
3 USB Flash Disk ..... 6
3.1 MSC mode ..... 7
3.2 MTP mode. ..... 7
4 Digital Audio device ..... 9
4.1 Power On/Off ..... 9
4.2 Change mode ..... 9
5 Music Mode ..... 10
5.1 Playback ..... 11
5.2 Pause ..... 11
5.3 Stop ..... 11
5.4 File navigation (Select folder/file) ..... 11
5.5 Select file ..... 12
5.6 Fast backward/forward ..... 12
5.7 Playback Sub-Menu ..... 12
5.8 A-B Repeat ..... 15
5.9 Adjust Volume ..... 15
6 DVR (Digital Voice Recording) ..... 16
6.1 Record to a File ..... 17
6.2 DVR Recording Sub-Menu ..... 17
6.3 Play a recorded file. ..... 19
7 FM Radio ..... 19
7.1 Adjust Frequency ..... 19
7.2 Automatic Search ..... 19
7.3 Edit Preset Frequency ..... 19
7.4 Select Preset Frequency ..... 20
7.5 Adjust Volume ..... 20
8 File Manager ..... 20
9 Setup ..... 21
9.1 Usb Mode ..... 24
9.2 Time ..... 24
9.3 Power ..... 25
9.4 Language ..... 25
9.5 Display ..... 25
9.6 Recording ..... 26
9.7 Sys Tools ..... 26
9.8 Custom EQ ..... 26
9.9 Storage ..... 26
10 Firmware Upgrade (End-User) ..... 27
10.1 “End-User Firmware Upgrade” utility ..... 27
11 Firmware Upgrade (Engineering) ..... 28

# 1 Features

- Support internal memory (Nand flash) and external memory card
  - NAND flash type:

"M5661 Pen Drive Flash-Card Support.xls

  - External memory card type: SD, MMC,

- Player:
  - Playback source: internal memory or external memory card
  - Support MP3 decoding:
    - Bit rate: 8K bps ~ 320K bps
    - Sampling rate: 8K ~48K
    - Channel: Stereo
  - Support WMA decoding:
    - Bit rate: 5K bps ~ 320K bps
    - Sampling rate: 8K ~48K
    - Channel: Stereo
  - Support IMA-ADPCM decoding:
    - Bit rate: 32K bps ~ 352 K bps
    - Sampling rate: 8K ~ 44.1K
    - Channel: Mono/Stereo
  - Support Lyrics display from
    - LRC text file format
  - Support artist / title / album display from
    - MP3 tag: V1.0, V2.2, V2.3, V2.4
    - WMA content metadata
  - Support A-B repeat.
  - Support adjustable playback rate.
  - Support fast forward / backward playback.
  - Support long file-name, file navigation
  - Selectable repeat mode: no repeat, single repeat, repeat all, and random all.
  - Selectable equalizer mode: Normal / Pop / Rock / Classic / Jazz / Bass / User EQ.
  - Selectable virtual surround mode: enable or disable.

- Voice Recorder
  - Record source: Line-In, or MIC, or FM
  - Record target: internal memory or external memory card
  - Selectable record mode: high quality, normal quality, or long-time mode
  - Support the following MP3 encoding modes:
    - 256K bps, 44.1K sampling, stereo
    - 128K bps, 44.1K sampling, stereo
    - 64K bps, 22.05K sampling, stereo
    - 32K bps, 16K sampling, mono
    - 16K bps, 12K sampling, mono
  - Support the following IMA-ADPCM encoding modes:

- Sampling: 8K , Mono, Bit rate: 32K
- Sampling: 11.025K, Mono, Bit rate: 44K
- Sampling: 16K, Mono, Bit rate: 64K
- Sampling: 22.05K, Mono, Bit rate 88K
- Sampling: 32K Mono, Bit rate 128K
- Sampling: 44.1K Mono, Bit rate 176k

- Sampling: 8K , Stereo, Bit rate: 64K
- Sampling: 11.025K , Stereo, Bit rate: 88K
- Sampling: 16K, Stereo, Bit rate: 128K
- Sampling: 22.05K, Stereo, Bit rate:: 172K
- Sampling: 32K Stereo, Bit rate 256K
- Sampling: 44.1K Stereo, Bit rate 352K

  - The summary of file format with different source and quality mode

| | Line In/ FM | MIC |
|---|---|---|
| High | MP3, 128K bps, 44.1K, stereo | MP3, 32K bps, 16K, mono |
| Normal | MP3, 64K bps, 22.05K, stereo | MP3, 16K bps, 12K, mono |
| Long time | MP3, 32K bps, 16K, mono | ADPCM, 32K bps, 8K, mono |

  - Support VAD in MP3 / IMA-ADPCM encoding mode.
    - The VAD sensitivity level is adjustable.( 69 / 76 / 83 dBV)

- FM Tuner
  - Frequency: 87.5 ~108 MHz
  - Tuner can adjust step by step or automatic search
  - User can set 10 preset bands

- Clock
  - Time
  - Alarm

- LCD
  - Selectable contrast
  - Selectable backlight time

- Automatic power off
  - Selectable power off time
  - Enable or disable power off function in playback is selectable

- Multi-language
  - Support unicode
  - User interface can select Traditional Chinese, Simplified Chinese, or English.

- Return to the environment last time automatically when power on

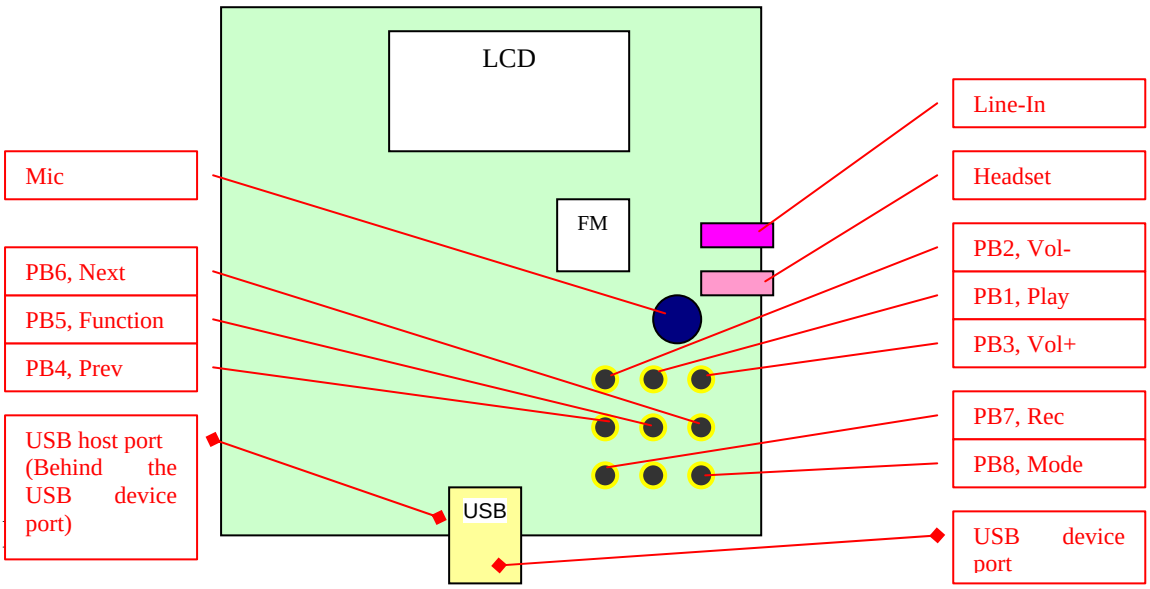
## 2 Overview

M5661 can operate in two types: USB flash disk / digital audio device (stand-alone).
If plugged to PC, it will become an USB flash disk. When it is stand-alone, it will become a portable digital audio device.

Buttons:

| Button ID | Key number | Function |
|---|---|---|
| Vol- | PB2 | Volume decrease |
| Play | PB1 | PowerOn,<br>Play,<br>Pause,<br>PowerOff |
| Vol+ | PB3 | Volume increase |
| Prev | PB4 | Previous |
| Function | PB5 | Command/Function |
| Next | PB6 | Next |
| Rec | PB7 | Recording/A-B repeat |
| Mode | PB8 | Mode change |
| | | |

The EV board block diagram:




## 3 USB Flash Disk

Plug the device to PC's USB port the LCD panel will display the following icon according to current USB Device mode:
DRM-10-compliant firmware (version 1.60.xx series) supports both MTP mode and MSC mode (USB mass storage class). If the firmware just supports MSC mode (Version 1.50.xx series ), it will just show up MSC icon on LCD.

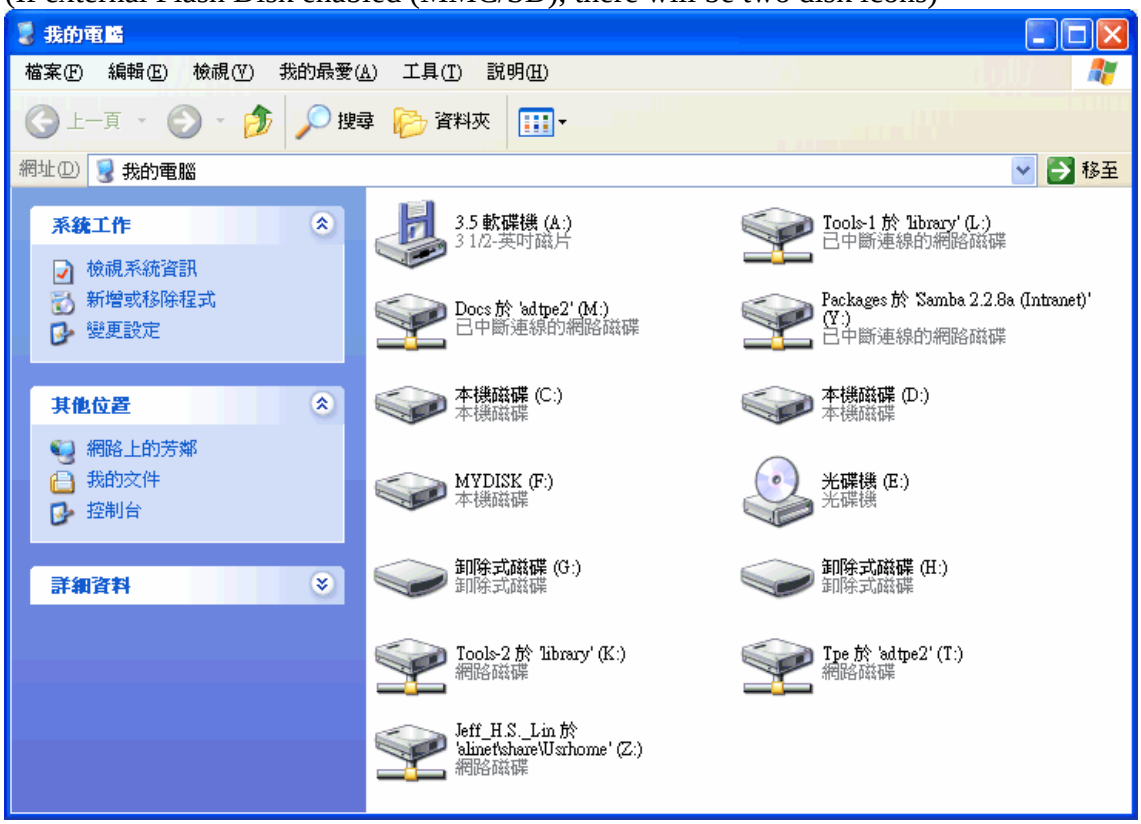
## 3.1 MSC mode

When M5661 device (MSC mode) gets connected to PC, and is in idle state.

PC is writing data to M5661 device.

PC is reading data from M5661 device

And the removable disk(s) icons will show up on “My Computer”:
(If external Flash Disk enabled (MMC/SD), there will be two disk icons)




## 3.2 MTP mode.

When M5661 device (MTP mode) gets connected to PC (support XP only), and is in idle state.

And the portable media player icon(s) will show up on “My Computer”:
(If external Flash Disk enabled (MMC/SD), there will be two icons)

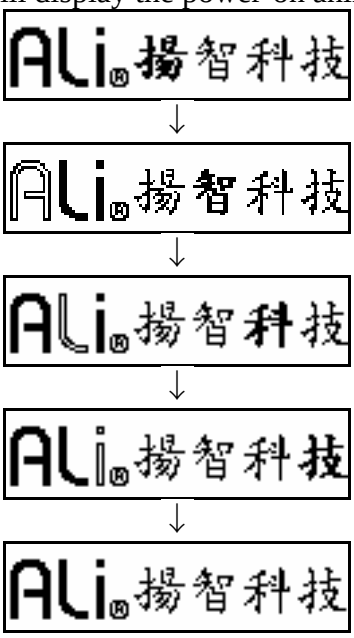
Windows Media Player 10 will detect M5661 device and display icon(s) on the screen.
User can sync transfer the content to M5661 device.
(If external Flash Disk enabled (MMC/SD), there will be two icons)

# 4 Digital Audio device

## 4.1 Power On/Off

Press the button Play (key1) can turn on the device, and press and hold this button will turn off the device.

When power on, the LCD panel will display the power-on animation:



Then it will go to the mode directly (Music, Voice, FM, Photo, File Manger, or Setup) when user powered off the device last time.

Note:

1. The device can memorize the mode last time. If it was turned off from FM mode, it will return to FM mode when turn on.
2. The default mode is music mode.

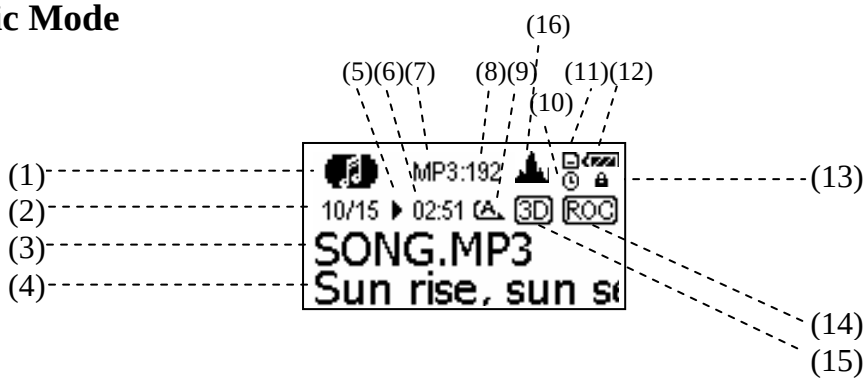
## 4.2 Change mode

Press the mode button (key 8) can change the mode, and the change sequence is as followed:

Music --- DVR --- FM --- System Setup --- File Manager

| Layer 1 | Layer 2 |
|---|---|
| Music | |
| | |
| DVR | |
| | |
| FM | |

# 5 Music Mode




(1) Music mode icon
(2) Current file number/Number of total files
(3) Title/Artist/Album or filename
(4) Lyrics
Status:

| | |
|---|---|
| Stop | ■ |
| Playback | ▶ |
| Pause | ⏸ |
| Fast Forward | ⏩ |
| Fast Backward | ⏪ |

(5) Playback status
(6) Time
(7) File format
(8) Bit rate
(9) Repeat: No repeat

| | |
|---|---|
| Single repeat | |
| All Repeat | |
| Random repeat | |
| Play in Folder | |
| Repeat All in Folder | |
| Random Repeat in Folder | |

A-B repeat

(10) Alarm
(11) External memory card
(12) Battery
(13) Key hold
(14) Equalizer: Normal
Pop
Rock
Classic
Jazz
Bass
User EQ
(15) Virtual surround
(16) Volume indicator

| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 |
|---|---|---|---|---|
| Music | Playback | File navigation | | |
| | | | | |



## 5.1 Playback

When the device status is stop or pause, press the play button (key 1) to playback.

## 5.2 Pause

When the device status is playback, press the play button (key 1) will pause it.

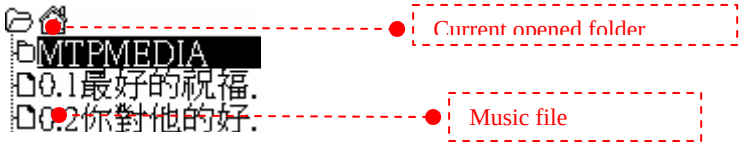
## 5.3 Stop

When the device status is playback or pause, long press the function button (key 5) to stop it.

## 5.4 File navigation (Select folder/file)

Long press the Button Menu (key 5) will enter folder/file browsing. User can browse all files in the current folder. Using the button Prev (key 4) / Next (key 6) to move the cursor up/down to the target object, then press the button Play (key 1) to play the selected file.(i.e. play from the current folder which contains the selected file.). Press the button Menu (key 5) can abort browsing folder/file, and go back to the playback mode.

Press button Play at a folder will go into that folder.




Only supported music file will be displayed on the LCD, such as MP3 and WMA files.

## 5.5 Select file

Press the button Prev (key 4) / Next (key 6) to select previous / next file. User can select previous / next file in any status.

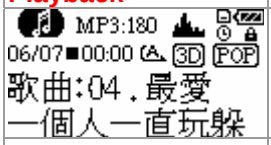
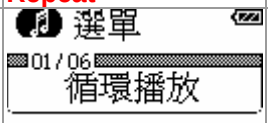
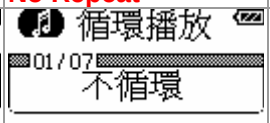
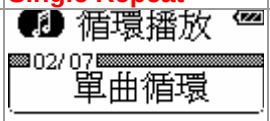
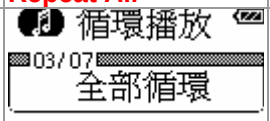
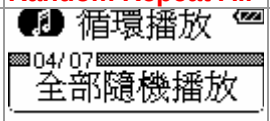
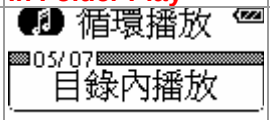
## 5.6 Fast backward/forward

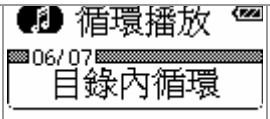
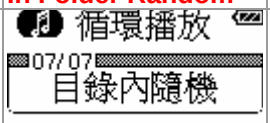
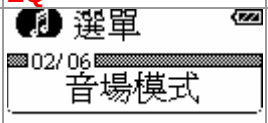
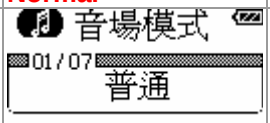
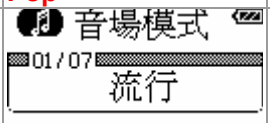
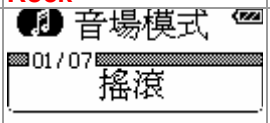
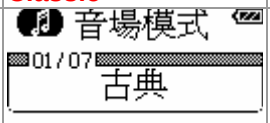
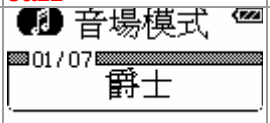
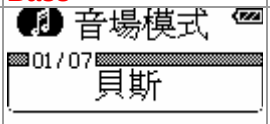
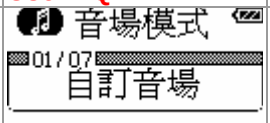
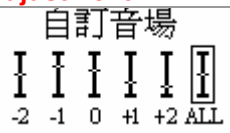
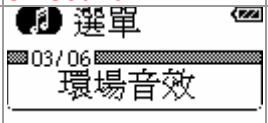
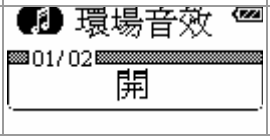
When the device status is in playback, long press the button Prev (key 4) / Next (key 6) will fast backward/forward the current file. Fast forward / backward will gradually speed up to 16 x when user doesn't release the Prev / Next.

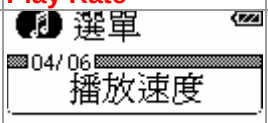
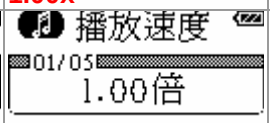
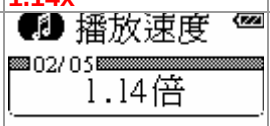
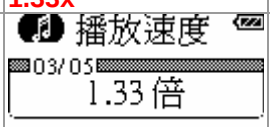
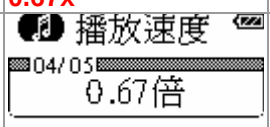
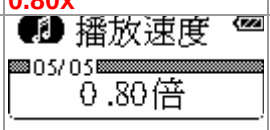
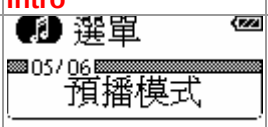
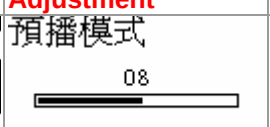
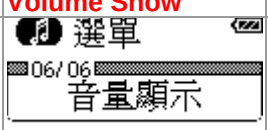
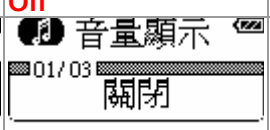
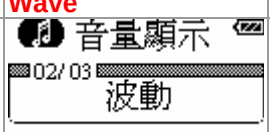
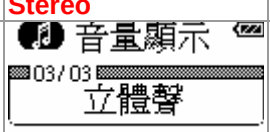
FF can move to next file when reaching the end of file. FB doesn't support this feature.

## 5.7 Playback Sub-Menu

The topology of playback sub-menu function

| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 |
|---|---|---|---|---|
| **Playback** | **Repeat** | **No Repeat** | | |
|  |  |  | | |
| | | **Single Repeat** | | |
| | |  | | |
| | | **Repeat All** | | |
| | |  | | |
| | | **Random Repeat All** | | |
| | |  | | |
| | | **In Folder Play** | | |
| | |  | | |
| | | **In Folder All** | | |

| | | | | |
|---|---|---|---|---|
| | |  | | |
| | | **In Folder Random** | | |
| | |  | | |
| | **EQ** | **Normal** | | |
| |  |  | | |
| | | **Pop** | | |
| | |  | | |
| | | **Rock** | | |
| | |  | | |
| | | **Classic** | | |
| | |  | | |
| | | **Jazz** | | |
| | |  | | |
| | | **Bass** | | |
| | |  | | |
| | | **User EQ** | **Adjustment** | |
| | |  |  | |
| | **3D sound** | **On** | | |
| |  | | | |
| | | **On** | | |
| | |  | | |

| | | | | |
|---|---|---|---|---|
| | **Play Rate** | **1.00x** | | |
| |  |  | | |
| | | **1.14x** | | |
| | |  | | |
| | | **1.33x** | | |
| | |  | | |
| | | **0.67x** | | |
| | |  | | |
| | | **0.80x** | | |
| | |  | | |
| | **Intro** | **Adjustment** | | |
| |  |  | | |
| | **Volume Show** | **Off** | | |
| |  |  | | |
| | | **Wave** | | |
| | |  | | |
| | | **Stereo** | | |
| | |  | | |

When the device is in Playback mode, press the button Menu(key 5) will enter playback sub-menu.

Press button Prev (key 4) / Next (key 6) to select an item, and press button Play (key 1) to select it.

The items of sub-menu include: Repeat, Equalizer, 3D surround and Play rate, Inro.

**(1) Change Repeat Mode**

Go to the playback sub-menu and select Repeat mode, there are four repeat modes on the

list:

**No Repeat:** Just play the current file. Stop playback when done.
**Repeat All:** Repeatedly play all files, (starting from current file)
**Single Repeat:** Repeatedly play current file.
**Random repeat all:** Repeatedly play a random file (randomly selected from all).
**In Folder Play:** Just play the current file in certain folder. Stop playback when done.
**In Folder All:** Repeatedly play all files in certain folder.
**In Folder Random:** Repeatedly play a random file in certain folder.

**(2) Change Equalizer Mode**

Go to the playback sub-menu and select Equalizer mode, there are seven Equalizer modes on the list: **Normal, Pop**, **Rock, Classic, Jazz, Bass**, and **User define**.

**(3) Virtual 3D Surround**

Go to the playback sub-menu and select Virtual Surround mode, user can enable or Disable the Virtual Surround function.

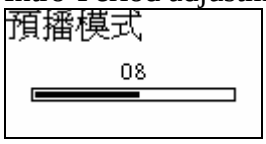
**(4) Change Play Rate**

Go to the playback sub-menu and select Play Rate item, user can adjust the play rate. The options of play rate are 0.67x, 0.80x, 1.00x, 1.14x, 1.33x.

**(5) Intro playback**

Intro playback is to play just a short period of content, instead of the entire file, let user can quickly scan all audio content in the disk. User can set the Intro period 0 ~ 15 seconds. 0 second means disable this function.

Intro-Period adjustment




**(6) Volume Show**

Go to the playback sub-menu and select Volume Show mode, user can select the volume display style when playback . There are three choices for this option, turn off, wave motion, stereo mode.

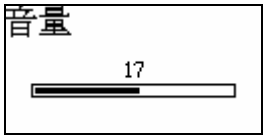
## 5.8 A-B Repeat

During playback, press the button Rec (key 7) to set the start point of the A-B repeat section, and press this button again can set the end point of the A-B repeat section. The device will play the section repeatedly. After that, press the same button again will cancel the A-B repeat mode.

## 5.9 Adjust Volume

In any playbackstate, press the button Vol- (key 2) to decrease the volume, or press the button Vol+ (key 3) to increase volume.

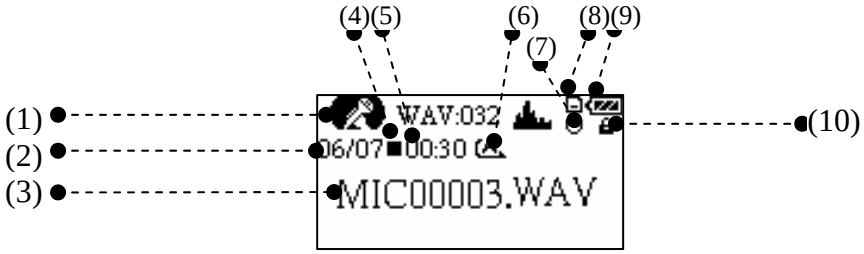
(step: 0 ~ 31)



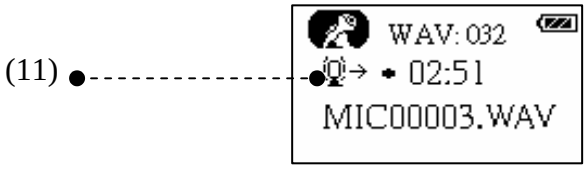

## 6 DVR (Digital Voice Recording)

In DVR mode, user can record sound from Line In, MIC to digital files, and play the voice recording files.

Playback mode:




Recording mode(when pressing button Rec)




(1) Voice mode icon
(2) Current file number/Number of total files
(3) Filename
(4) Status: Stop ■
Playback ▶
Pause ⏸
Record ● (blinking)
(5) Time
(6) Repeat: No repeat
Single repeat
All Repeat
Random repeat
Play in Folder
Repeat All in Folder
Random Repeat in Folder
A-B repeat
(7) Alarm
(8) External memory card

(9) Battery
(10) Key hold
(11) Recording Source
Line In
Mic

## 6.1 Record to a File

**(1) General Recording Function**

When the device status is stop or pause, press button Rec (key 7) will start recording. During recording, press button Rec (key 7) can pause it, and press the same button (key 7) again will continue recording. In the end, press button Menu (key 5) to stop recording and save the recording file.

**(2) The Recording Folder and Filename format**

The recording file will be saved in different folders, according to the recording quality and voice source.
For example, the FM recording files will be saved in folder “\FMIN” .

And, the recording filename will contain prefix to indicate the voice source, serial number, and file type.

The unified filename format is,
"MIC" / "LINE" / “FM” + series number + ".MP3" / ".WAV”.

Such as,
“MIC0001.WAV”, “MIC0002.MP3”, “LINE0003.WAV”, “FM00001.MP3” …

**(3) Auto Insert Recording Serial Number Name.**

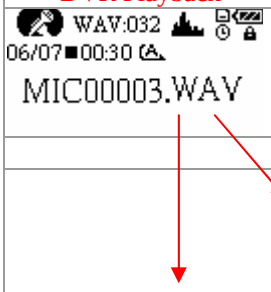
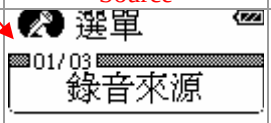
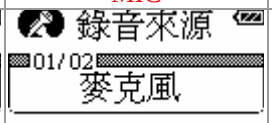
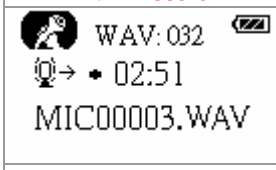
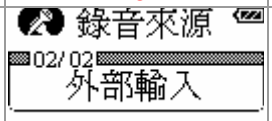
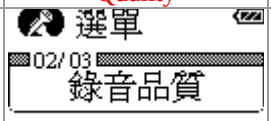
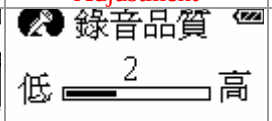
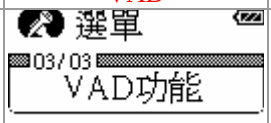
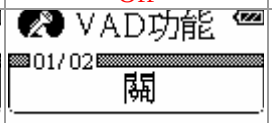
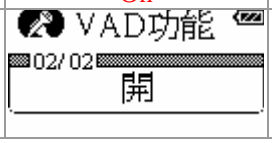
The serial number of recording filename increases every time. When filename already exits, it will search for next available serial number to make up its filename.

**(4) VAD Recording Function**

When the recording voice is quieter than background sound, the device automatically pauses recording and the icon ● will disappear. Then, if the recording voice is louder than background sound, it will automatically record and Blink the item ● again. The background sound means that the first sound after pressing the button Rec (key 7).

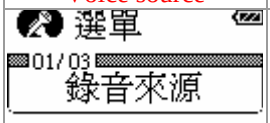
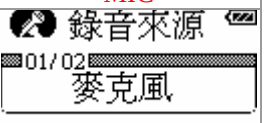
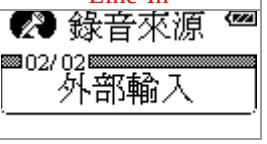
## 6.2 DVR Recording Sub-Menu

When the device status is stop, long press the button Rec (key 7) will enter the DVR sub-menu. Then press button Prev (key 4) or button Next (key 6) to move item, and press button Play (key 1) to select it or press button Menu (key 5) to exit it. The items of sub-menu are:
Source, Quality and VAD.

| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 |
|---|---|---|---|---|
| DVR Playback | | | | |
|  | | | | |
| | Source | MIC | | |
| |  |  | | |
| DVR Record | | Line-In | | |
|  | |  | | |
| | Quality | Adjustment | | |
| |  |  | | |
| | VAD | Off | | |
| |  |  | | |
| | | On | | |
| | |  | | |

**(1) Change the Source**

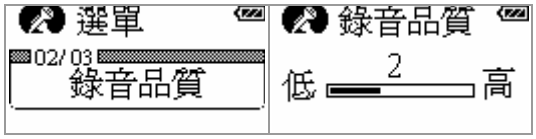
Go to the recording sub-menu and select source item. Under this item, user can select “Line In” or “Mic” as the source.

| Voice source | MIC |
|---|---|
|  |  |
| | Line-In |
| |  |

**(2) Change the Quality**

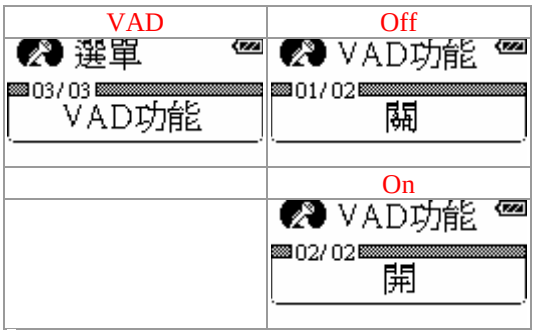
Go to the recording sub-menu and select quality item. Under this item, user can select the quality degree. (4 degrees)

| Quality | Adjustment |
|---|---|




**(3) VAD Function Selection**

Go to the recording sub-menu and select VAD item. Under this item, user can select whether using VAD (voice active detection) function




.

## 6.3 Play a recorded file.

The operation of playback is similar to music playback mode.
Press button Menu will go into DVR Playback Sub-Menu, to change Repeat mode, Intro Playback Period, and Play Rate ( see the Music Playback).

# 7 FM Radio

| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 |
|---|---|---|---|---|
| FM playback | Preset Edit | | | |
| ST<br>目前頻道<br>96.3 MHz | ST<br>儲存預設電台<br>09 10 00 01 02<br>96.3 MHz | | | |

## 7.1 Adjust Frequency

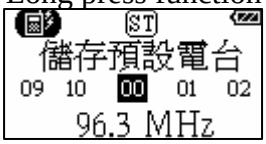
Press button Prev (key 4) to decrease the frequency, and press button Next (key 5) to increase the frequency. Each step is 0.1 MHz.

## 7.2 Automatic Search

Long press button Prev (key 4) will decrease the frequency and search a radio station automatically. Long press button Next (key 6) will search band will increase the frequency to search a radio station.

## 7.3 Edit Preset Frequency

Long press function key (key 5) and the LCD panel will display preset number and frequency.




"Adjust Frequency" or "Automatic Search", to select a frequency, and press the button Rec (key 7) to save the frequency to current preset number. After that, the preset number will go to the next automatically, and let user to save next preset frequency. If user want to edit specific preset number, press button Play (key 1) to change the preset number. Finally, press the Button Menu (key5) to close the edit mode.

### 7.4 Select Preset Frequency

After edit preset frequency, user can change the frequency directly by select the preset number. Just press the button Play (key 1) to select the preset number.

### 7.5 Adjust Volume

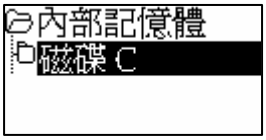
In any state, press the button Vol- (key 2) to decrease the volume, or press the button Vol+ (key 3) to increase volume.

## 8 File Manager

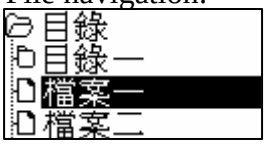
| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 |
|---|---|---|---|---|
| Source disk | Partition | Function | | |
| 選擇來源<br>內部記憶體<br>SD/MMC記憶卡<br>外接裝置 | 內部記憶體<br>磁碟 C | 選單<br>資訊<br>格式化<br>放棄 | | |
| | | File navigation | Operation | |
| | | 目錄<br>目錄一<br>檔案一<br>檔案二 | 選單<br>複製<br>刪除<br>資訊 | |

Select a source disk from menu

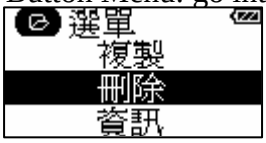
Select a partition from the source disk
Press button Play will enter file navigation, press button Menu will enter function menu



File navigation:




Button Next / Prev: move to the object
Button Vol+: to check (select) the file object.
Button Play: go into the folder in the current object is a folder
Button Menu: go into function menu, to Copy / Delete / View file information.

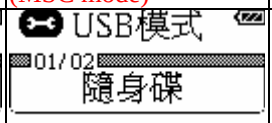
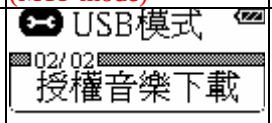
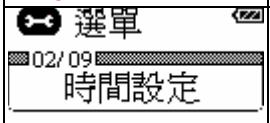
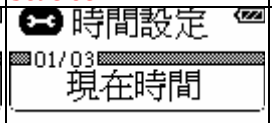
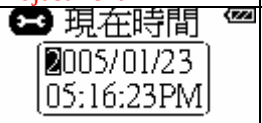
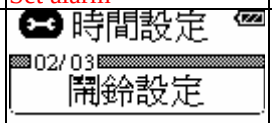
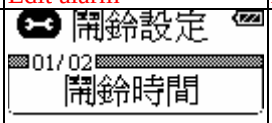
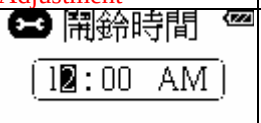



Press button Menu again will cancel the operation
Press button Play will perform the selected function.

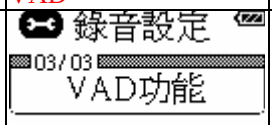
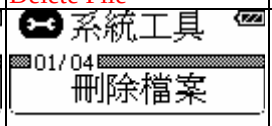
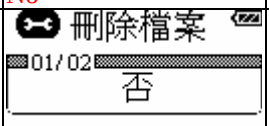
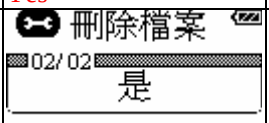
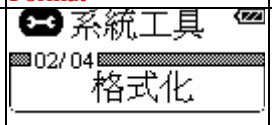
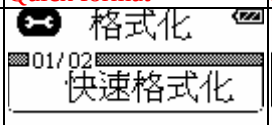
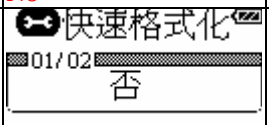
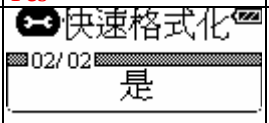
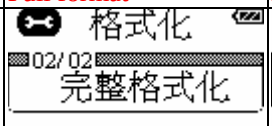
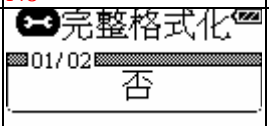
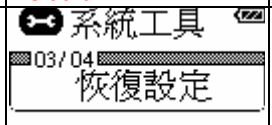
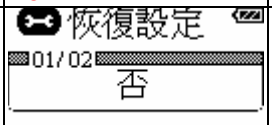
## 9 Setup

In setup mode, user can change the system settings. The common operation of this mode is to press the button Play (key 1) to select, press the button Menu (key 5) to cancel, and press the button Prev (key 4) or the button Next (key 6) to move item.

The topology of System Setup menu

| Layer 1 | Layer 2 | Layer 3 | Layer 4 | Layer 5 | Layer 6 |
|---|---|---|---|---|---|
| USB mode | Pen drive (MSC mode) | | | | |
| |  | | | | |
| | DRM download (MTP mode) | | | | |
| |  | | | | |
| Time | Set clock | Adjustment | | | |
|  |  |  | | | |
| | Set alarm | Edit alarm | Adjustment | | |
| |  |  |  | | |
| | | On/Off | Off | | |

| | | | | | |
|---|---|---|---|---|---|
| | | 開鈴設定<br>02/02<br>開鈴開關 | 開鈴開關<br>01/02<br>關 | | |
| | | | On | | |
| | | | 開鈴開關<br>02/02<br>開 | | |
| Power saving | Setting | | | | |
| 選單<br>03/09<br>省電設定 | 省電設定<br>☐自動關機:000<br>☑播放中不關機 | | | | |
| Language | Chinese Tran | | | | |
| 選單<br>04/09<br>語言設定 | 語言設定<br>09/55<br>Chinese(Trad) | | | | |
| | Chinese Simp | | | | |
| | 語言設定<br>10/55<br>Chinese(Simp) | | | | |
| | English | | | | |
| | 語言設定<br>15/55<br>English | | | | |
| Display | Contrast | Adjustment | | | |
| 選單<br>05/09<br>顯示設定 | 顯示設定<br>01/02<br>對比 | 對比<br>39 | | | |
| | Backlight | Adjustment | | | |
| | 顯示設定<br>02/02<br>背光 | 背光<br>等待 3 秒 | | | |
| Record | Source | Mic | | | |
| 選單<br>06/09<br>錄音設定 | 錄音設定<br>01/03<br>錄音來源 | 錄音來源<br>01/02<br>麥克風 | | | |
| | | Line-In | | | |
| | | 錄音來源<br>02/02<br>外部輸入 | | | |
| | Quality | Adjustment | | | |
| | 錄音設定<br>02/03<br>錄音品質 | 錄音品質<br>低 3 高 | | | |

| | | | | | |
|---|---|---|---|---|---|
| | VAD | Off | | | |
| |  | | | | |
| | | On | | | |
| | | | | | |
| System Tool | Delete File | FileList | No | | |
| |  | |  | | |
| | | | Yes | | |
| | | |  | | |
| | Format | Quick format | No | | |
| |  |  |  | | |
| | | | Yes | | |
| | | |  | | |
| | | Full format | No | | |
| | |  |  | | |
| | | | Yes | | |
| | | | | | |
| | Default | No | | | |
| |  |  | | | |
| | | Yes | | | |
| | | | | | |
| | System Info | Information | | | |

| | | | | | |
|---|---|---|---|---|---|
| | 系統工具<br>04/04<br>系統資訊 | 系統資訊<br>FW:01.60.26<br>CHIP:07<br>FREE:105MB | | | |
| User EQ | Adjustment | | | | |
| 選單<br>08/09<br>自訂音場 | 自訂音場<br>-2 -1 0 +1 +2 ALL | | | | |
| Storage | Internal | | | | |
| 選單<br>09/09<br>儲存媒體 | 儲存媒體<br>01/02<br>內部記憶體 | | | | |
| | SD / MMC | | | | |
| | 儲存媒體<br>02/02<br>SD/MMC記憶卡 | | | | |

## 9.1 Usb Mode

**(1) Pen Drive**

Select “USB Mode→Pen Drive”, the device will act as a USB pen drive when plugging into USB port.

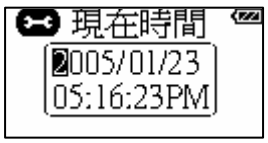
**(2) DRM Download**

Select “USB Mode→DRM Download”, the device will act as a MTP device when plugging into USB port. It is used to download the Janus-DRM-protected (Digital Right Management) media files and license through WMP 10(Windows Media Player 10), and it only supports Windows XP SP1 above.

## 9.2 Time

**(1) Adjust**

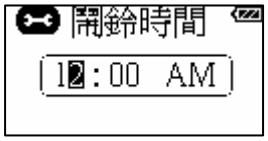
Select “Time→Adjust”, and the LCD panel will display current time.




Press the button Prev (key 4) or button Next (key 6) to move cursor, and then press the button Vol- (key 2) / Vol+ (key 3) to change the value. The time is set while adjusting. In the end, press the button Play (key 1) or the Button Menu (key 5) to return to Setup menu.

**(2) Alarm**

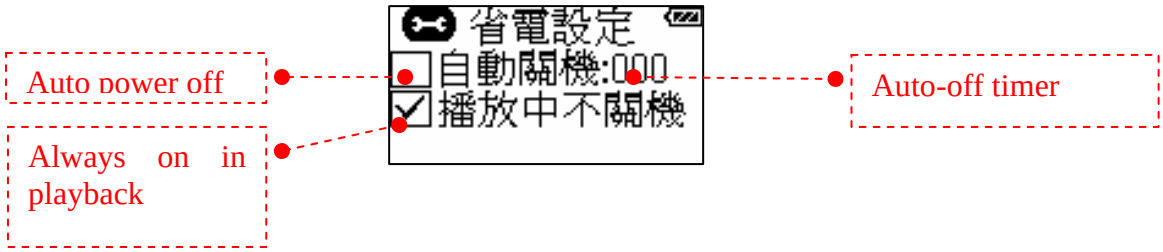
Select “Time→Alarm→Adjust”, and the LCD panel will display current alarm time.



Press the button Prev (key 4) / Next (key 6) to move cursor, and then press the button Vol- (key2) / Vol+ (key 3) to change the value. The alarm time is set while adjusting. In the end, press the button Play (key 1) / the Button Menu (key 5) to return to Setup menu.
Select "Time→Alarm→On/Off→On" to enable the alarm function; or select "Time→Alarm→On/Off→Off" to disable the alarm function.
When the alarm function is turned on, the LCD panel will display alarm icon

## 9.3 Power

Select the power item, and the LCD panel will display as follows:




**Auto-Off: Auto Power Off setting**
Press button Prev (key 4) / Next (key 6) to move cursor, and then press the button Vol- (key 2) / Vol+ (key 3) to change the value. If user adjust the number to "020", it means the device will power off automatically if the user doesn't press any key in twenty minutes. When the Auto-Off timer expires, system will check the item **"Always on in playback"**. If this item is checked and the device is playing songs, system won't power off the device. This setting is useful for sleeping mode.
When user wants to enjoy music while sleeping, and automatically power off the device when all songs are played out. He can set "Auto Off" timer, and checked the flag "**Always on in playback**"
.

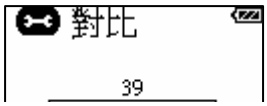
## 9.4 Language

User can select language to change the system menu and information display. The current EV board supports 55 kinds of languages including English, Chinese (Trad.), Chinese (Simp) …exc.

## 9.5 Display

**(1) Contrast**

Select "Display→Contrast"; press button Prev (key 4) / Next (key 6) to change contrast, and then press the button Play (key 1) or the Button Menu (key 5) to return to Setup menu.



**(2) Backlight**

Select "Display→Backlight"; press the button Prev (key 4) or button Next (key 6) to change the backlight time, and then press the button Play (key 1) or the Button Menu (key 5) to return to menu.

## 9.6 Recording

**(1) Recording Source**

Select "Record→Source→Line In" to set recording from "Line In" input;
Or select "Record→Source→MIC" to set recording from device's built-in microphone.

**(2) Record Quality**

Select "Record→Quality→Long Time" for voice quality and smaller file size.
Select "Record→Quality→Normal Quality" for radio quality and normal file size.
Select "Record→Quality→High Quality" for CD quality and bigger file size.

**(3) VAD functional selection**

Select "Record→VAD" to turn on/off VAD function.

## 9.7 Sys Tools

**(2) Format**

Select "Sys Tools→Format→Quick" to quickly format;
Select "Sys Tools→Format→Complete" to completely format as the FAT16 file system.

**(3) Reset**

Select "Sys Tools→ Reset" to reset the portable audio player to the default setting.

**(4) System Info**

Select "Sys Tools→System Info" to check the system information: Firmware version, Chip version, and free space of the internal memory.

## 9.8 Custom EQ

Select the "Custom EQ" item to adjust the custom EQ. Press the button Prev (key 4) / Next (key 6) to move cursor, and then press the button Vol- (key 2) / Vol+ (key 3) to change the value.

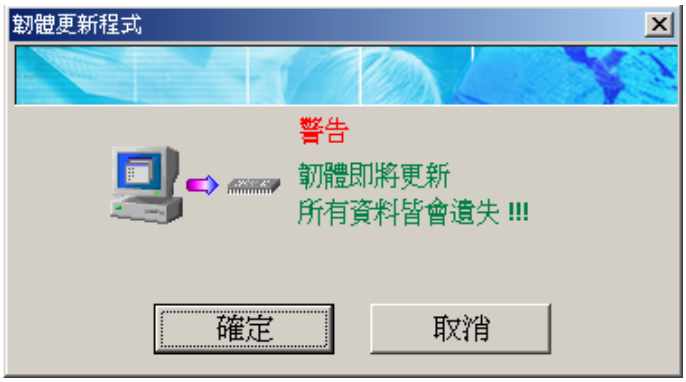
## 9.9 Storage

Select "Storage→Internal" to playback from or record to device's internal memory. Select "Storage→SD/MMC Card" to playback from or record to device's external SD/MMC card. When the device is selected to use the external memory card to playback or recording, the LCD panel will show a disk icon ( ) to indicate that system is using external memory card.

# 10 Firmware Upgrade (End-User)

## 10.1 “End-User Firmware Upgrade” utility

User can upgrade the firmware binary by the “End-User Firmware Upgrade” utility




1. If there is no such device connected on the USB host port, a warning message will show .

2. If more than one device connected on the USB host, a warning message will show .

3. This tool only burning one device every time. Confirmation dialog box will ask user to begin firmware upgrade process.

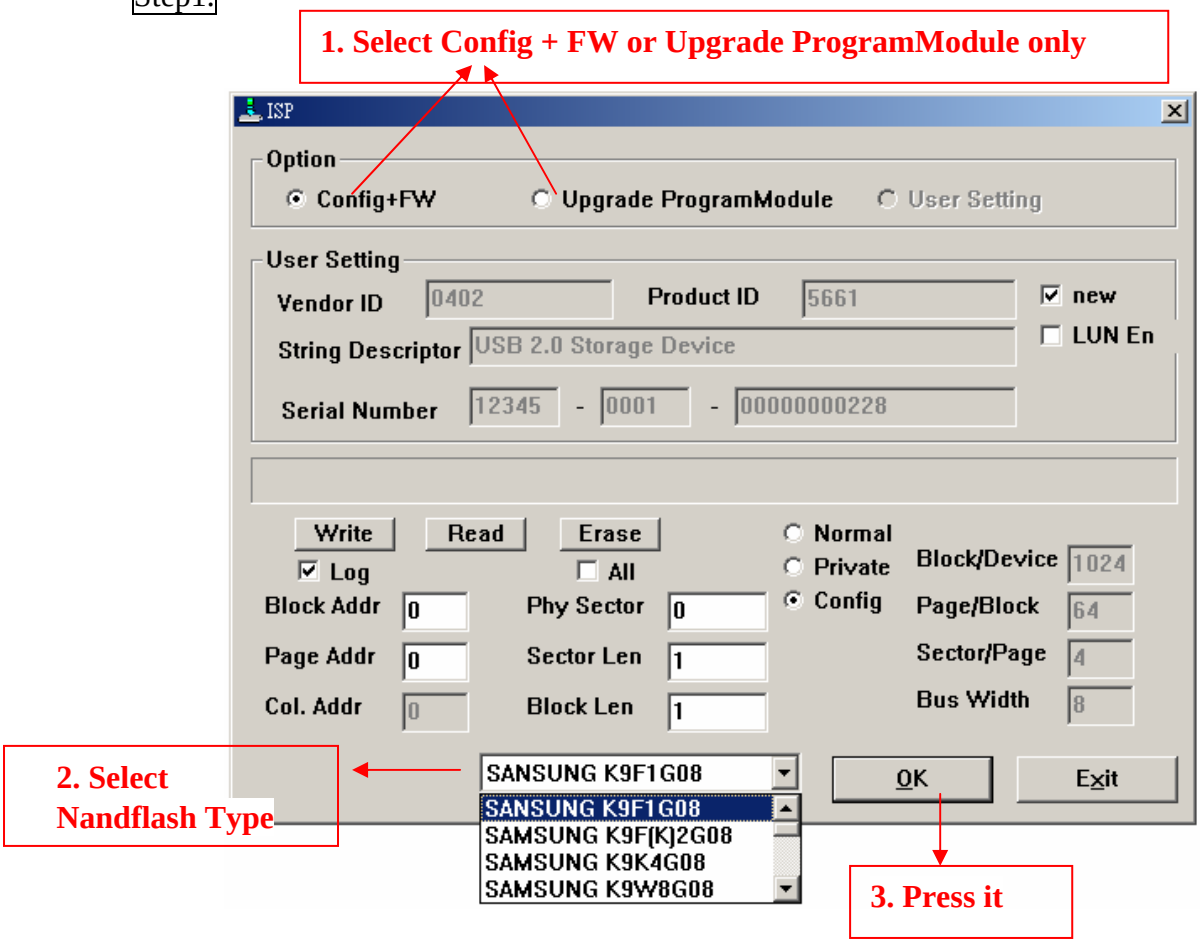
4. After clicking the [Yes], the firmware upgrade will proceed. When the firmware upgrade process finishes, a message box will display.

The new firmware won't take effect until user re-plugs the device to PC.

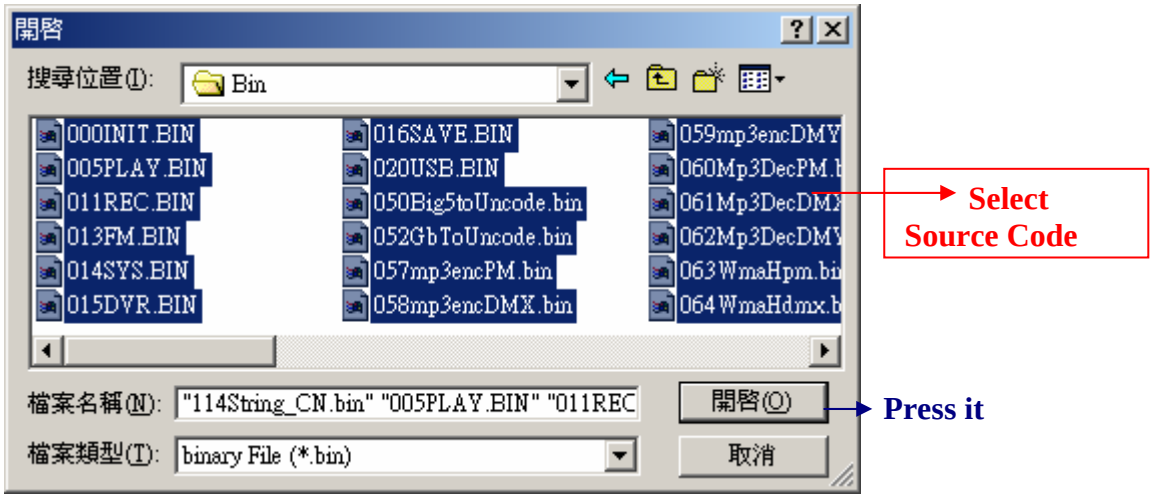
## 11 Firmware Upgrade (Engineering)

This is a firmware Upgrade utility for engineering purpose (User can change some configurable information before burning the firmware binary to the M5661 device)

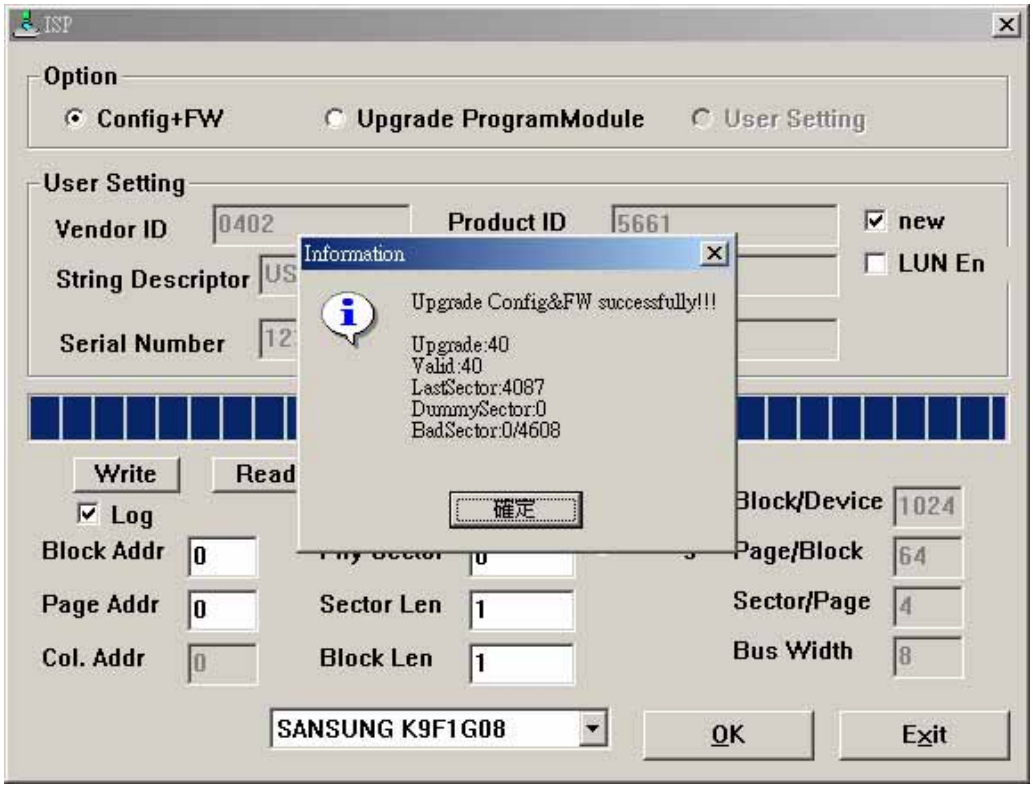
Step1.




Step2.



Step3.


ISP
Option
Config+FW
Upgrade ProgramModule
User Setting
User Setting
Vendor ID
0402
Product ID
5661
new
String Descriptor
LUN En
Serial Number
Information
Upgrade Config&FW successfully!!!
Upgrade:40
Valid:40
LastSector:4087
DummySector:0
BadSector:0/4608
確定
Write
Read
Log
Block/Device
1024
Block Addr
0
Page/Block
64
Page Addr
0
Sector Len
1
Sector/Page
4
Col. Addr
0
Block Len
1
Bus Width
8
SANSUNG K9F1G08
OK
Exit